

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F01B9/02 F16H21/46 E05F15/12 B23B39/16 B23Q1/54

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F01B E05F B23Q B23B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 25 52 258 A1 (GRUEKO KONSTRUKTIONEN GMBH) 2 June 1977 (1977-06-02) abstract; figures -----	1,2,21, 27
X	EP 0 402 967 A (SALVAGNINI TRANSFERICA S.P.A) 19 December 1990 (1990-12-19) the whole document -----	1,27, 29-32
X	US 4 656 788 A (RHOADES ET AL) 14 April 1987 (1987-04-14) the whole document -----	1,27,29
X	US 4 733 432 A (NOVOSELSKY ET AL) 29 March 1988 (1988-03-29) the whole document ----- -/--	1,2,27, 28

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

9 May 2005

Date of mailing of the international search report

20/05/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 4 798 024 A (GRIMM ET AL) 17 January 1989 (1989-01-17) column 3, lines 7-68; figure 1 -----	1,2,5,6, 27
X	US 5 163 789 A (WEBER ET AL) 17 November 1992 (1992-11-17) column 3, line 33 - column 4, line 8; figures -----	27,29
A	DE 198 12 789 A1 (RICHTER, JOACHIM) 30 September 1999 (1999-09-30) the whole document -----	1-58
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